

## Abstract

An accident sensor for a motor vehicle for triggering a safety system is provided.

A deformable and radiation transparent synthetic material part is penetrated by a defined quantity of light traveling in a beam path. A radiation sensitive detector optically

5 detects the deformation of the material part by detecting a change in the beam path to determine a position of impact on the motor vehicle based a signal waveform and a determination of the transit time between the impact and the detection of the signal.

The material part is arranged externally on the motor vehicle.